

MUSIC COMPOSER W/EARS on & EDIT
(COMPOSE BY EAR)

This program is designed to allow full usage of synthesizer functions at a relatively high speed, (18 changes/sec.) allowing up to 539 changes or entries, and also allowing the user to set up melody patterns first, and then "squeezing in" timings, or deleting mistakes, later. The notes being entered may be heard and compared against preceding notes for correctness before being written. With all these functions, however, operation may be difficult at first, requiring a little practice.

DISPLAY AND INSTRUCTIONS

(synth. func.) 16 17 18 19 20 21 22 23 24, (#24 used for timing)
(mem. posit.) 0 0-0 #0 pos. keeps track of highest pos. used [Z]
operand → 1 0=0 center pos. always one being operated on
(JY-1) ↑ 2 0=0 following value also displays
 ↑ value arrow shows func. select on S(20)
 function(h) start entering notes or changes @
 pos. #1 . Max. allowable timing, 999.

Program may be halted at any time and volumes set manually by; "s[21]" as V= "n" "s[22]" as W= "n". To jump Quickly to any mem. pos. w/o using joystick, set A to desired loc. GOTO 7 again to run. There are two routines in this program where hand controller #1 has different functions as follows.

Routine #1 KN= function select, JY left-write note or value(N), JY right-enter routine #2, TR=hear note or execute center display operation, JX=mem.advance or retreat, "PRINT" plays comp, "SPACE" squeezes in, "ERASE" deletes center display & moves everything down. It moves everything up 1 Routine #2 KN= no func., JY=select new value, JX left=hear center pos., JX right=hear value just entered as arrow function., TR=return to main program.(enter value for N & press "GO")

To execute center displayed function & value, press TR-1. Also be sure to pull TR-1 when making volume changes as song progresses. At end of song set all osc.'s back to 0. (to terminate sound & reset for running again.) To enter a value push JX to right. An "N" will appear as it waits for you to enter a value that can be assigned to any function later. However if you want to hear the value you just set, the arrow must be pre-positioned (knob) before entering this routine. (volumes on also) To hear note after entering and pressing G0 push JY-right. To compare against preceding note, push left. (note you want to compare with, must be in center pos. If you selected the wrong value push JY either way, and make a new selection. To return to main program (to write value N as any function) pull trigger. To advance or retreat memory pos. use JY. ↑ TO write function(↑) & value in center pos. push JX left. To delete mistake push erase key (whatever is in center pos. will be eliminated) To put in a space for extra note hit space key. (for the last two edit functions hold the key down until left side of screen flashes once) To play composition hit PRINT. If TR is pulled on #24 funct. #16 will have to be reset. If screen goes black while in value enter routine, you had 0=0's in center pos. Simply pull TR to return to main prog. & color will be restored. To record completed composition: PRINT; LIST; FOR A=0 TO 2; PRINT@"(", #0, A, ")" = ", #0, @A; NEXT A; A=A-1; PRINT; GOTO 7

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.GOTO 7 TO RUN
3 FOR B=1 TO Z;GOTO @(B)÷Fx2+4
4&(RM÷D)=RM
5NEXT B;GOSUB 69;RETURN
6FOR T =1 TO RM ; NEXT T;GOTO 5
7CLEAR;:RETURN;NT=0;$(1)=157;$(2)=0;$(3)=96;$(9)=0;D=1000;F=24000;
Z=@(0)
8PRINT"16 17 18 19 20 21 22 23 24
9BOX 0,33,160,7,2;K=(KN(1)+128)÷30;CX=Kx18-73;CY=33;PRINT"↑
12@(0)=Z;A=A+JY(1);IF A<1 A=1
15IF A>Z IF @(A)>0Z=A
18X=A-2;FOR B=1 TO 3;X=X+1;CX=-79;PRINT #0,X,"→",#0,@(X)÷D,"=",
#0, RM," ";:NEXT B;IF TR(1) GOSUB 63
21IF $(23)=16 BC=7;GOSUB 39
23IF JX(1)=1 GOSUB 42
24IF $(21)=16 BC=7;GOSUB 36
27IF JX(1)<0 @(A)=(K+16)xD+N
30IF $(20)=16 GOSUB 3
33$(0)=134;BC=236;GOTO 9
36FOR B=A TO Z;@(B)=@(B+1);NEXT B;Z=Z-1;RETURN
39Z=Z+1;FOR B=Z TO A+1 STEP -1;@(B)=@(B-1);NEXT B;@(B)=0;RETURN
42CX=0;INPUT N;IF K=5 V=N
45FOR B=17 TO 19;$(B)=0;NEXT B;IF K=6 W=N
48IF JX(1)=1$(K+16)=N;GOSUB 72;GOSUB 66
51IF JX(1)<0 GOSUB 63
54IF TR(1) RETURN
57IF JY(1) GOTO 42
60GOTO 45
63GOSUB 72;$(@(A)÷D)=RM;GOSUB 66;RETURN
66FOR B=1 TO 200;NEXT B;GOSUB 69;RETURN
69$(21)=0;$(22)=0;RETURN
72$(21)=V;$(22)=W;RETURN

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